



**Project name:** Greater Lafayette  
Wind Energy Project

**Transit agency:** Greater Lafayette Public  
Transportation Corporation (GLPTC)

**Location:** Lafayette, Indiana

**TIGGER goal:** Energy reduction

**FTA region number:** V

**Award amount:** \$2,180,750

**Congressional district:**  
Indiana district 4

**Funding mechanism:**  
Recovery Act (ARRA)

## **GLPTC Powers its Facilities with Renewable Wind Power**

With nearly \$2.2 million of TIGGER funding, this Greater Lafayette Wind Energy Project—to erect three wind turbines—is designed to provide energy savings for the Greater Lafayette Public Transportation Corporation (GLPTC).

The direct three-phase turbines are connected to the power grid, and will provide a renewable energy source to power GLPTC's administrative and maintenance facilities in Lafayette, Indiana. The agency's two buildings consume 768,000 kilowatt hours (kWh) of energy annually, previously using electricity purchased from the local utility provider. GLPTC's goal is to use renewable energy sources to generate enough power to match what its facilities use every year.

With each wind turbine expected to generate about 180,000 kWh annually, the renewable wind electricity generated at GLPTC will meet about 70% of its energy use.



*Greater Lafayette Public Transportation Corporation (GLPTC)* operates in northwestern Indiana, serving the Lafayette metropolitan area, providing nearly 5 million rides annually. Because Lafayette is home to Purdue University, the area has the second highest ridership of any transit agency in Indiana. GLPTC operates 70 buses, 6 demand response vehicles, and 10 support vehicles. Twenty of the buses are hybrid diesel-electric and two vehicles are trolleys. GLPTC's objective is to be a proactive community leader, meeting the public transportation needs.

Courtesy of GLPTC



Additionally, by using net metering to connect the wind turbines to the utility's electric grid, GLPTC can sell excess generated wind power back to the utility. The annual energy savings are expected to be 1,842 million Btu.

**Impact:**

GLPTC is replacing 70% of its annual energy consumption with renewable wind power generated on-site.

In addition to greatly reducing GLPTC's electricity purchases, this new technology will provide a visible commitment to clean energy and a sustainable future for the transit agency's operations.

GLPTC chose turbines from Northern Power, a Vermont-based wind power technology company. The Cascade Power Group from the Pacific Northwest and Kent Power, in neighboring Michigan, handled the renewable energy installation. The lifespan of the installed turbines is estimated to be 30 years.



A close-up of the wind turbine gear box housing complete with GLPTC logo (top). Installation of the wind turbine on top of the tower at the GLPTC facility in Lafayette, IN (bottom).

**About TIGGER**

*The Transit Investment for Greenhouse Gas and Energy Reduction (TIGGER) Program was established in 2009 by the U.S. Department of Transportation's Federal Transit Administration (FTA). Designed to reduce energy use and greenhouse gas emissions in transit agencies around the country, the TIGGER Program made funds available for capital investments that would reduce greenhouse gas emissions or lower the energy use of public transportation systems. An initial \$100 million in American Recovery and Reinvestment Act grants funded 43 competitively-selected transit projects. In 2010, the FTA provided an additional \$75 million in grants to fund 27 new TIGGER projects. These 70 projects are employing a variety of technologies to meet the program goals, including solar installations, building efficiency improvements, wind technology, wayside energy storage for rail, and purchase of more efficient buses. In fiscal year 2011, FTA provided an additional \$49.9 million to continue the program.*

**For More Information**

GLPTC:  
[www.gocitybus.com](http://www.gocitybus.com)

FTA TIGGER:  
[www.fta.dot.gov/TIGGER](http://www.fta.dot.gov/TIGGER)



U.S. Department of Transportation  
Federal Transit Administration  
1-866-377-8642

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